

WHAT WE CLAIM IS:

1. A method of data transmission on demand to an unlimited number of clients without acknowledgment on the basis of constant data availability, comprising the steps of:
 - providing a data transmission system comprising at least a server system that contains the entire information available for the clients;
 - at least one router on the side of said server capable of receiving data from said server system;
 - at least one router on the side of said clients;
 - a wide area network; and
 - a group of clients subscribed to said data transmission system and capable of receiving at least a portion of said entire information selected by said client from said server system via said one router on the side of said server, one router on the side of said clients, and said wide area network;
 - constantly transmitting said entire information to said at least one router on the side of said server system and further to said wide area network for constant availability of said entire information to any number of said clients.

2. The method of Claim 1, wherein said step of constantly transmitting said entire information to said at least one router on the side of said server system is carried out simultaneously via parallel channels.

3. The method of Claim 2, wherein said parallel channels are combined into groups of channels having the same data transmission speed in each group.
4. The method of Claim 3, wherein said entire information is transmitted simultaneously via all said groups.
5. The method of Claim 1, further comprising the following steps on the side of said server system:
 - dividing said entire information into data segments;
 - dividing each one of said data segments into information data units, each of said information data units comprising a rectangular matrix of lines and columns;
 - assigning numbers to said lines and columns;
 - determining a check information for each one of said information data units by manipulating data in said lines and columns;
 - collecting said check information from all said information data units to form control data unit;
 - reorganizing said data units by collecting lines to which the same numbers are assigned to said reorganized data units;
 - assigning identification information to each of said reorganized data units and said control data units; and
 - forming information protocol data units and control protocol data units by combining said identification information with respective reorganized data units and said control data units.
6. The method of Claim 4, further comprising the following steps on the side of said server system:

dividing each one of said data segments into information data units, each of said information data units comprising a rectangular matrix of lines and columns;

determining a check information for each one of said information data units by manipulating data in said lines and columns;

reorganizing said data units by collecting lines to which the same numbers are assigned into a reorganized data units; assigning identification information to each of said reorganized data units and said control data units; and

forming information protocol data units and control protocol data units by combining said identification information with respective reorganized data units and said control data units.

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
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| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

obtaining a request from at least one of said clients for receiving a selected information from said entire information via said at least one router;

receiving said selected information from said at least one router by
said at least one of said clients;

checking the completeness of said selected information received by said at least one client; and

discontinuing said step of receiving if said selected information has been received completely.

8. The method of Claim 5, further comprising the steps of:
- obtaining a request from at least one of said clients for receiving a selected information from said entire information via said at least one router;
 - receiving said selected information from said at least one router by said at least one of said clients;
 - checking the completeness of said selected information received by said at least one client; and
 - repeating said steps of receiving and checking until said selected information has been received completely.
9. The method of Claim 2, further comprising the following steps on the side of said server system:
- dividing said entire information into data segments;
 - dividing each one of said data segments into information data units, each of said information data units comprising a rectangular matrix of lines and columns;
 - assigning numbers to said lines and columns;
 - determining a check information for each one of said information data units by manipulating data in said lines and columns;
 - collecting said check information from all said information data units to form control data unit;
 - reorganizing said data units by collecting lines to which the same numbers are assigned into a reorganized data units;
 - assigning identification information to each of said reorganized data units and said control data units; and

forming information protocol data units and control protocol data units by combining said identification information with respective reorganized data units and said control data units.

10. The method of Claim 6, further comprising the steps of:

receiving at least one request from at least one of said clients by said at least one router for obtaining a portion of said entire information selected by said at least one client via said at least one router where said entire information is always available due to said step of constantly transmitting;

starting transmitting said entire information **via** said at least one router to all said groups of channels and then to said at least one client at least via one channel of said group having the speed of transmission corresponding to that on the client's side.

11. The method of Claim 10, further comprising the step of checking completeness of the information during receiving said information by said at least one client by:

collecting said information protocol data units and said control protocol data units relating to said portion of said entire information selected by said at least one client;

extracting said reorganized information data units from said information protocol data units;

extracting said control data units from said control protocol data units;

checking completeness of said information data units relating to each said data segment in said portion of said entire information selected by said at least one client;

converting said reorganized data units to the form preceding said step of reorganizing.

12. The method of Claim 11, further comprising the steps of:

assembling each of said data segments contained in said portion of said entire information selected by said at least one client from said information data units related to said data segments, if said information data units are present; and

assembling each of said data segments contained in said portion of said entire information selected by said at least one client from said information data units related to said data segments.

13. The method of Claim 12, further comprising the steps of:

interrupting said step of receiving, if said portion of said entire information selected by said at least one client is received.

14. The method of Claim 12, further comprising the step of repeating all said steps collecting said information protocol data units and said control protocol data units relating to said portion of said entire information selected by said at least one client.

15. The method of Claim 11, further comprising the steps of:

restoring said data lost during said step of receiving by means of said control data unit and those of said information data units which have been received by said at least one client and relates to the same data segment.

16. The method of Claim 15, further comprising the steps of:

assembling each of said data segments contained in said portion of said entire information selected by said at least one client from said information data units related to said data segments, if said information data units are present; and

assembling all said data segments contained in said portion of said entire information selected by said at least one client from said information data units related to said data segments.

17. The method of Claim 16, further comprising the steps of:

interrupting said step of receiving, if said portion of said entire information selected by said at least one client is received.

18. The method of Claim 16, further comprising the step of repeating all said steps collecting said information protocol data units and said control protocol data units relating to said portion of said entire information selected by said at least one client.

19. A method of parallel data transmission on demand to an unlimited number of clients without acknowledgment on the basis of constant data availability, comprising the steps of:

providing a data transmission system comprising a server system that contains the entire information available to the clients and comprises:

at least one data storage device;

at least one data transmitting unit capable of receiving information from said main storage device, at least one send box in said at least one data transmitting unit;

a plurality of routers capable of receiving data from said at least one send box;

a wide area network; and

a group of clients subscribed to said data transmission system and capable of receiving at least a portion of said entire information from said server via said routers and said wide area network;

dividing said entire information into a plurality of data segments;

dividing each of data segments of said plurality into a plurality of information protocol data units;

combining said information protocol data units into information protocol data unit groups;

coding said information protocol data unit groups for obtaining control protocol data units, one of said control protocol data units being assigned for each group of said information protocol data unit groups, each of said information protocol data units consisting of a header and a data, each of said control protocol data units consisting of a header and data;

adding to each said information protocol data unit group a respective control protocol data unit; and

constantly transmitting said entire information in the form of said information protocol data unit groups with respective control protocol data units to one selected router of said plurality of routers, said one selected router having a plurality of data transmission channels divided into groups with different speeds of data transmission.

20. The method of Claim 19, further comprising the steps of:

receiving at least one request from at least one of said clients by said at least one router for obtaining at least a portion of said entire information from said at least one router where said entire information is always available due to said step of constantly transmitting;

starting transmitting said entire information from said at least one router to all said groups with different speeds of data transmission and then to said at least one client at least via one channel in a group having the speed of transmission corresponding to that at the client's side.

21. The method of Claim 20, further comprising the step of checking completeness of the information received by said at least one client by decoding said information protocol data units, checking completeness of said information protocol data units by checking said headers in each of said information protocol data units, and in case of completeness interrupting the data transmission and disconnecting said at least one client from said at least one router.

22. A data transmission system comprising:

a server system that contains the entire information available to the clients and comprises:

at least one server system comprising:

at least one server system manager;

at least one main data storage device;

at least one data transmitting unit capable of receiving information from said main storage device;

at least one router on the side of said server system capable of receiving said entire information from said at least one send box;

a group of clients subscribed to said data transmission system and capable of receiving at least a portion of said entire information from said server via said routers and said wide area network; and at least one router on the side of said group of clients.

24. A data transmission system comprising:

at least one server system comprising:

a plurality of data transmission boxes in each of said data transmitting units;

the Internet;

a group of clients subscribed to said data transmission system and capable of receiving at least a portion of said entire information from said

server system via said routers on the side of said server system and said ;
the Internet; and

a plurality of routers on the side of said group of clients.

25. The data transmission system of Claim 24, wherein said at least one data transmitting unit contains at least one data transmission box, at least data storage device.

26. A data transmission system comprising:

a server system that contains the entire information available to the clients and comprises:

at least one server system comprising:

at least one server system manager;

at least one main data storage device;

at least one data transmitting unit capable of receiving
information from said main storage device;

at least one router on the side of said server system capable of
receiving said entire information a from said at least one send box;
a wide area network;

a group of clients subscribed to said data transmission system
and capable of receiving at least a portion of said entire information
from said server via said routers and said wide area network; and
at least one router on the side of said group of clients.

27. The data transmission system of Claim 26, wherein said at least one data transmitting unit contains at least one data transmission box, at least one data storage device.

27. The data transmission system of Claim 26, wherein said at least one data transmitting unit contains at least one data transmission box, at least one data storage device.